binds to the melanocortin 4 receptor].

Sub. D2

3. (amended) The animal of claim 2 wherein the molecule is [a] syndecan -1.

B1

4. (amended) The animal of claim 2 wherein the [molecule] syndecan is expressed preferentially in the areas of the hypothalamus responsible for the regulation of body weight and energy balance.

7. (amended) A genetically engineered construct for making a transgenic animal comprising a promoter and a nucleic acid molecule encoding a syndecan, wherein the syndecan

B2

is preferentially expressed in the regions of the hypothalamus responsible for the regulation of body weight and energy balance.

10. (amended) A method for screening for compounds which can alter body weight comprising

Sub. D3

administering a compound to a non-human transgenic animal genetically engineered to express a syndecan or proteoglycan portions thereof [having binding to the melanocortin 4 receptor function inactivated] , wherein the animal is characterized by an obese phenotype., and

B3

observing whether there is a change in body weight over a period of time.

11. (amended) The method of claim 10 wherein the animal expresses a [molecule] syndecan from a genetically engineered construct stably integrated into its genome [wherein the molecule binds to the melanocortin 4 receptor].

12. (amended) The method of claim 10 wherein the [molecule] syndecan is [a] syndecan - 1.

13. (amended) The method of claim 11 wherein the [molecule] syndecan is expressed

Sub. D4